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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/470,967	12/23/1999	Kunihiro Seta	018976-154	6834
21839	7590	04/21/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P				HECKENBERG JR, DONALD H
POST OFFICE BOX 1404				
ALEXANDRIA, VA 22313-1404				
				ART UNIT
				PAPER NUMBER
				1722

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/470,967	SETA ET AL.	
	Examiner Donald Heckenberg	Art Unit 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 February 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2,4-7,35,54-61 and 63-73 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 54-61 and 63-73 is/are allowed.
- 6) Claim(s) 1,2,4-7 and 35 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on January 23, 1999 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

1. The indicated allowability of claims 1, 2, 5, 7, and 35 is withdrawn in view of the newly discovered reference(s) to Japanese Pub. No. 05-131509. Rejections based on the newly cited reference follow.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5, 7, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Pub. No. 05-131509 (previously of record; hereinafter "JP '509"; reference below will be made to the drawings of the publication, as well as the computer translation of the publication made of record with this Office Action).

JP '509 discloses an injection molding machine. The machine comprises a plasticating unit (11) for plasticating a thermoplastic resin. An injection unit (31) is connected to the plasticating unit through a connecting passage (27) to inject the plasticated resin into a mold. A buffering unit (20) comprising a pot having a buffering chamber (23) is provided,

with the buffering unit receiving the resin plasticated in the plasticating unit. A plunger (22) is reciprocatably disposed in buffering unit to be moved forward and backward through the use of a fluid pressure cylinder means (25) for energizing the plunger in the resin extrusion direction (translation ¶ 14-16, 18). A detecting sensor (63 and 64) is also provided to detect the position of the plunger (translation ¶ 22). In detecting the position of the plunger, the detecting sensor must inherently also detect a position of a piston rod (24) which is connected to the plunger (see figure 1).

Claims 1 and 7 recite limitations directed towards the use of the apparatus. Specifically, claim 1 recites that the buffering unit has a buffering chamber with a volume at least equal to the injection quantity per shot, and that the buffering unit feeds resin from the buffering chamber into the injection unit after injection by the injection unit, which both relate to the use of the mold as far as how much resin is injected into the mold, and when the resin is injected into the mold during use. Claim 7 recites that constant fluid pressure from a fluid pressure source is transmitted to the fluid-pressure cylinder, which relates to how the plunger is operated while using the mold. It is well settled that the intended use of an apparatus is not germane to the issue of patentability of

the apparatus. In re Casey, 370 F.2d 576, 580 152 USPQ 235, 238 (CCPA 1967); In re Otto, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963); MPEP § 2115. In the instant case, JP '509 discloses all of the claimed apparatus structure as described above, and therefore anticipates the claims regardless of the claimed operating uses.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '509 in view of Cheng (U.S. Pat. No. 5,098,267; previously of record).

JP '509 discloses the injection molding machine as described above. JP '509 does not disclose the energizing means for the plunger to comprise a spring or electric actuator.

Cheng discloses an injection molding apparatus. Cheng notes that a spring (18) or other mechanical device can be used as an alternative to a fluid pressure cylinder to operate a plunger (cl. 3, ll. 62-65).

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It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to have modified the machine disclosed by JP '509 as such to have the energizing means comprise a spring or other mechanical device such as an electric motor as an alternative to the fluid pressure cylinder because springs and mechanical devices are known in the art as alternatives which can equivalently operate plungers as suggested by Cheng.

8. Claims 54-61 and 63-73 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest a thermoplastic resin injection molding machine as defined in claim 54 or claim 60. The closest prior art disclosed by JP '509 is described above. JP '509, nor any of the other references of record, teach or suggest a pressure sensor for detecting a pressure in a buffering chamber provided in a plasticating unit, with the plasticating unit connected to an injection unit as recited in claim 54. JP '509, nor any of the other references of record, also do not teach or suggest a position detecting sensor for the screw contained in the

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plasticating unit, and a controller calculating an amount of resin in the buffering chamber based on the position of the screw and controlling the screw as recited in claim 60.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (571) 272-1131. The examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at (571) 272-1151. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions

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on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at (866) 217-9197 (toll-free).



Donald Heckenberg
April 14, 2004